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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 91

[Docket No.: FAA-2015-2147; Notice No. 15-05]

RIN 2120-AK51

Transponder Requirement for Gliders

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Advance Notice of Proposed Rulemaking (ANPRM).

SUMMARY: The FAA requests public comment on removal of the current transponder exception for gliders. This action responds to recommendations from members of Congress and the National Transportation Safety Board. The purpose of this action is to gather information to determine whether the current glider exception—from transponder equipment and use requirements—provides the appropriate level of safety in the National Airspace System. The FAA will use the information gathered from this action to determine whether additional transponder equipment and use requirements are necessary for gliders operating in the excepted areas.

DATES: Send comments on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Send comments identified by docket number FAA-2015-2147 using any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov> and follow the online instructions for sending your comments electronically.
- Mail: Send comments to Docket Operations, M-30; U.S. Department of Transportation (DOT), 1200 New Jersey Avenue, SE., Room W12-140, West Building Ground Floor, Washington, DC 20590-0001.
- Hand Delivery or Courier: Take comments to Docket Operations in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- Fax: Fax comments to Docket Operations at 202-493-2251.

Privacy: In accordance with 5 USC 553(c), DOT solicits comments from the public to better inform its rulemaking process. DOT posts these comments, without edit, including any personal information the commenter provides, to www.regulations.gov, as described in the system of records notice (DOT/ALL-14 FDMS), which can be reviewed at www.dot.gov/privacy.

Docket: Background documents or comments received may be read at <http://www.regulations.gov> at any time. Follow the online instructions for accessing the docket or go to the Docket Operations in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: For technical questions concerning this action, contact Jon M. Stowe, Airspace Regulations Team, AJV-113, Federal

Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone (202) 267-8783; e-mail jon.m.stowe@faa.gov.

For legal questions concerning this action, contact Anne Moore, Office of the Chief Counsel, AGC-220, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone (202) 267-3073; e-mail Anne.Moore@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

See the “Additional Information” section for information on how to comment on this advance notice of proposed rulemaking (ANPRM) and how the FAA will handle comments received. The “Additional Information” section also contains related information about the docket, privacy, and the handling of proprietary or confidential business information. In addition, there is information on obtaining copies of related rulemaking documents.

Authority for this Rulemaking

The FAA’s authority to issue rules on aviation safety is found in Title 49 of the United States Code. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency’s authority.

This rulemaking is promulgated under the authority described in 49 U.S.C. 40103, which vests the Administrator with broad authority to prescribe regulations to assign the use of airspace necessary to ensure the safety of aircraft and the efficient use of airspace, and 49 U.S.C. 44701(a)(5), which requires the Administrator to promulgate regulations

and minimum standards for other practices, methods, and procedures necessary for safety in air commerce and national security.

List of Abbreviations and Acronyms Frequently Used In This Document

ADS-B - Automatic Dependent Surveillance – Broadcast

ANPRM – Advance Notice of Proposed Rulemaking

LASE - Light Aircraft Surveillance Equipment

LPSE – Low Powered Surveillance Equipment

MSL – Mean Sea Level

NAS – National Airspace System

NMAC – Near Midair Collision

NTSB - National Transportation Safety Board

TABS – Traffic Awareness Beacon System

TCAS - Traffic Alert and Collision Avoidance System

TSO - Technical Standard Order

I. Executive Summary

The purpose of this advance notice of proposed rulemaking (ANPRM) is to solicit input from interested persons involving glider operations in the National Airspace System (NAS). The ultimate goal is to ensure safety of flight for gliders and other aircraft operating in the NAS. The National Transportation Safety Board (NTSB) and two members of Congress requested rulemaking because of a midair collision between a glider and a private jet. The FAA notes that it is currently encouraging the voluntary equipage of Traffic Awareness Beacon System (TABS) devices on aircraft excepted from

carrying a transponder, such as gliders.¹ The FAA is also considering the current and future implications of Automatic Dependent Surveillance-Broadcast (ADS-B) that may impact this potential rule change.

II. Background

The FAA is initiating this ANPRM for comment from the public regarding the removal of the glider exception from the transponder equipment and use requirements established in 14 CFR 91.215.²

This section establishes the specific technical standards for the transponder equipment's functionality, and defines the airspace where transponder equipment is required to operate. Generally, these areas include specific classes of airspace surrounding many airports (e.g. Class B and Class C airspace), most airspace above 10,000 ft., and airspace within 30 nautical miles (NM) of some of the nation's busiest airports. There are certain types of aircraft, including gliders, that are excepted from the transponder requirement within a portion of these areas.³ The FAA is not seeking comment on this exception for aircraft other than gliders.

A. National Transportation Safety Board (NTSB) Recommendations

¹ Technical Standard Order, TSO-C199: Traffic Awareness Beacon System (TABS), October 10, 2014.

² The rule states that, with a few exceptions, all aircraft must have an operating transponder with Mode C (altitude reporting information) in the following areas: Class A, Class B, and Class C airspace; below 10,000 feet Mean Sea Level (MSL) and within 30 nautical miles (nm) of the 36 airports listed in Appendix D to part 91 (Mode C Veil); and above 10,000 feet MSL, except that airspace that is below 2,500 feet Above Ground Level (AGL).

³ The exceptions to the rule allow aircraft that were originally certificated without an engine-driven electrical system, balloons, and gliders to be operated in the following areas without a transponder: Within the 30 nm of the 36 listed airports listed in Appendix D to part 91 (Mode C Veil) provided they remain outside the Class A, B, or C airspace and are below the ceiling of the airspace designated for the Class B or C airport, or 10,000 feet MSL, whichever is lower; Above 10,000 feet MSL; and in the airspace from the surface to 10,000 feet MSL within a 10-nautical-mile radius of any airport listed in appendix D, excluding the airspace below 1,200 feet outside of the lateral boundaries of the surface area of the airspace designated for that airport.

On March 31, 2008, the NTSB provided safety recommendations⁴ to the FAA resulting from an investigation following an August 28, 2006, Reno midair collision between a Hawker 800XP airplane, N879QS, and a Schleicher ASW27-18 glider, N7729. The collision occurred in flight about 42 NM south-southeast of the Reno/Tahoe International Airport (RNO), at an altitude of about 16,000 feet (ft.) mean sea level (MSL)—an area excepted from transponder equipment and use requirements for gliders. Although the glider was equipped with a transponder, the glider pilot had turned off the equipment to conserve power. The findings of this accident investigation address the limitations of the see-and-avoid concept in preventing midair collisions, and specifically, the benefits of transponders in gliders for collision avoidance.

The NTSB recommended that the FAA remove the glider exceptions pertaining to the transponder equipment and use requirements, finding that “transponders are critical to alerting pilots and controllers to the presence of nearby traffic so that collisions can be avoided.” The FAA agrees with the NTSB on the benefits of transponders in collision avoidance.

B. Congressional Actions

On March 13, 2012, The Honorable Harry Reid, United States Senate, wrote to the FAA expressing concerns about the safety of both gliders and other aircraft utilizing the same airspace around RNO. Senator Reid requested the FAA “invoke its emergency rulemaking procedure to remove the glider exemption” from § 91.215. Additionally, on April 27, 2012, the Honorable Mark E. Amodei, United States House of Representatives,

⁴ [A-08-10 through 13](http://www.nts.gov/doclib/recletters/2008/a08_10_13.pdf), Safety Recommendations. National Transportation Safety Board, Washington, D.C. 20594, March 31, 2008. A copy of this report has been placed in the docket. http://www.nts.gov/doclib/recletters/2008/a08_10_13.pdf

wrote to the FAA to voice similar concerns about the impact of gliders on the safety of air traffic operations into and out of RNO. Congressman Amodei also encouraged the FAA to expedite the process to remove the glider exception from § 91.215.

C. FAA Response

The FAA Administrator responded to both Members of Congress on May 18, 2012, explaining that while the FAA had considered emergency rulemaking, the FAA decided an ANPRM was an opportunity to gather input from the glider community.⁵ In response to both the NTSB safety recommendations and the congressional requests, the FAA analyzed the reports in the Aviation Safety and Reporting Subsystem (ASRS) database. The NTSB safety recommendation cited 60 Near Mid-Air Collisions (NMAC) in the ASRS database involving air carrier/corporate jet traffic and gliders from 1998 to August 2007 for all airspace areas. The FAA reviewed the ASRS database from 1988 to October 2014 and found approximately 45 reports of NMACs involving gliders in or near the excepted areas of § 91.215.⁶

It is important to recognize the limitations of air-traffic radar services. In some instances, Air Traffic Control (ATC) may not be able to issue traffic advisories concerning aircraft that are not under ATC control and are not displayed on radar. Radio waves normally travel in a continuous straight line. However, they may be “bent” by abnormal atmospheric phenomena such as temperature inversions, and/or screened by high terrain features, reflected or attenuated by dense objects such as heavy clouds,

⁵ Copies of the congressional recommendations have been placed in the docket.

⁶ This database does not specifically indicate if a glider is equipped with a transponder or other beacon system.

precipitation, ground obstacles, or mountains, etc. Many glider operations take place near mountains to take advantage of ridge lift and mountain waves. As a result, areas near mountains where glider pilots often operate may have minimal to no radar coverage.

Primary radar energy that strikes dense objects is reflected and displayed on the controller's scope. The amount of reflective surface of an aircraft determines the size of the radar return. Therefore, a small light aircraft, like a glider, is more difficult to see on primary radar than a large commercial jet or military bomber. Additionally, primary radar uses filters to eliminate the display clutter caused by reflections from stationary objects (e.g. buildings, mountains) and slow-moving vehicles (e.g. trucks, cars). Gliders, when not moving very fast across the ground, may be filtered out as ground clutter and not displayed to the controller.

The use of transponders has been important in achieving a higher level of safety, particularly in areas where high and low speed traffic is intermixed under Instrument and Visual Flight Rules (IFR and VFR respectively). In issuing this ANPRM, the FAA understands that glider design and electrical power limitations present unique challenges for the installation and operation of transponders. The FAA requests comments on removing the transponder use exception for gliders in order to improve safety.

D. Traffic Awareness Beacon System (TABS)

The FAA notes that it is currently encouraging the voluntary equipage of TABS devices on aircraft excepted from carrying a transponder or ADS-B equipment, such as

gliders, balloons and aircraft without electrical systems.⁷ TABS is described in FAA Technical Standard Order (TSO) - C199 and allows aircraft equipped with collision avoidance and traffic advisory systems to track and display the TABS equipped aircraft.

E. Automatic Dependent Surveillance – Broadcast (ADS-B) Requirements

The FAA also acknowledges that the exception from certain ADS-B Out requirements in § 91.225 is provided to gliders in the same manner as they are excepted from the transponder requirement. This ANPRM also seeks comment and information specifically on issues relating to the glider exception from the current transponder equipment and ADS-B requirements and use.

III. Discussion/Questions Concerning Proposal under Consideration

The FAA is aware that removing established equipment exceptions for glider operations could impose significant costs on the glider community. Therefore, the FAA is issuing this ANPRM, rather than a Notice of Proposed Rulemaking (NPRM), to seek comments from the public and industry to aid in the development of a proposed rule and the analysis of its economic impact.

The FAA requests comments and recommendations on the following issues. The sequence in which the issues are presented does not reflect any specific FAA preference.

Please refer to the specific question number when submitting comments.

A. TSO-C199, Traffic Awareness Beacon System (TABS)

⁷ During the development of the new TSO-C199, these systems were referred to as Low Powered Surveillance Equipment (LPSE), and Light Aircraft Surveillance Equipment (LASE). The current acceptable terminology for these systems is Traffic Awareness Beacon System (TABS).

A TABS device is a low cost compact system that allows other aircraft equipped with collision avoidance systems and traffic advisory systems to track and display the TABS aircraft. TABS devices are intended for use on aircraft that are excepted from carrying a transponder or ADS-B equipment, such as gliders. TABS are not for use in receiving air-traffic control services. The intent of TABS is to enable equipped aircraft to be more visible to other aircraft operating with Traffic Advisory System (TAS), Traffic Alert and Collision Avoidance System I (TCAS I), Traffic Alert and Collision Avoidance System II (TCAS II), TCAS II hybrid surveillance, and aircraft equipped with ADS-B In capability. TABS devices are manufactured under a TSO authorization with less rigorous specifications than transponders meeting the requirements of § 91.215. The FAA requests comments and recommendations on the following issues related to proposing the use of TABS devices:

A1. Rather than requiring gliders to meet §§ 91.215 and 91.225, should the FAA require TABS equipment? Please explain your answer.

A2. Do you have an alternative suggestion to increase safety?

A3. Please provide cost estimates, with supporting details or documentation, including equipment, glider manufacturer, and model:

A3.1. Provide estimate of total equipment cost(s). List all necessary components.

A3.2. Provide estimate of installation cost(s).

A3.3. Provide estimate of maintenance costs (e.g. batteries, antenna).

A4. Do you have, or plan to have, TABS installed on your glider? Please explain your answer.

B. Transponder Equipment and Use in Gliders

Section 91.215 describes transponder equipment and use requirements for aircraft. Under § 91.215, gliders may conduct operations without transponder equipment within 30 NM of an airport listed in appendix D, section 1 of part 91—provided such operations are conducted outside any Class A, Class B, or Class C airspace areas, and below the altitude of the ceiling of a Class B or Class C airspace area designated for an airport, or 10,000 feet mean sea level (MSL), whichever is lower. Gliders operating above 10,000 feet MSL are also excepted from the transponder requirement. The FAA requests comments and recommendations on the following issues relating to removing the exception for gliders provided in § 91.215:

B1. Should the FAA remove the glider exception from § 91.215 and require gliders to comply with the transponder equipment and use rules? Please explain your answer.

B2. If the FAA removes the glider exception from § 91.215, how would safety be affected?

B3. Please provide cost estimates, with supporting details or documentation, including equipment, glider manufacturer, and model:

B3.1. Provide estimate of total equipment cost(s). List all necessary components.

B3.2. Provide estimate of installation cost(s).

B3.3. Provide estimate of maintenance costs (e.g. batteries, antenna).

B4. If the FAA requires gliders to be equipped with transponders in excepted airspace, should they also be subject to the ADS-B equipment requirements under § 91.225? Please provide supporting information.

C. ADS-B Out Equipment and Use in Gliders

Section 91.225 describes ADS-B Out equipment and use requirement for aircraft operating after January 1, 2020. Under § 91.225(e) certain gliders may conduct operations without ADS-B Out, within 30 NM of an airport listed in appendix D, section 1 of part 91 provided these operations are conducted outside any Class A, Class B, or Class C airspace area and below the altitude of the ceiling of a Class B or Class C airspace area designated for an airport, or 10,000 feet MSL, whichever is lower. Further exception from the ADS-B requirement is provided to gliders operating above 10,000 feet MSL. The FAA requests comments and recommendations on the following issues relating to removing the exception for gliders provided under § 91.225(e):

C1. Should the FAA require gliders to meet the ADS-B equipment and use rules? Please provide supporting information.

C2. If the FAA removes the glider exception from § 91.225, would the level of operational safety increase? Please provide supporting information.

C3. Please provide cost estimates, with supporting details or documentation, including equipment, glider manufacturer, and model:

C3.1. Provide estimate of total equipment cost(s). List all necessary components.

C3.2. Provide estimate of installation cost(s).

C3.3. Provide estimate of maintenance costs (e.g. batteries, antenna).

C4. If gliders are required to meet the ADS-B equipment and use rules, should they also be required to meet the transponder equipment requirements? Please provide supporting information.

C5. Do you have or plan to have ADS-B In or ADS-B Out installed on your glider? Please explain your answer.

D. Additional Considerations

D1. Can you suggest changes to current requirements or other equipment that would reduce the risk of collision for glider operations? If so, what specific requirements or procedures should be considered?

D2. Have you had a collision or near collision while operating a glider? If so, please explain what happened.

D3. Have you had a collision or near collision with a glider while operating an aircraft other than a glider? If so, please explain what happened.

D4. Do you operate a glider within any of the following excepted areas? Please describe the type of airspace, location, frequency of operations, and any safety concerns during these operations.

- Within 30 nautical miles of an airport listed in appendix D, section 1 of part 91 provided such operations are conducted outside any Class A, B, or C airspace areas, and below the altitude of the ceiling of a Class B or Class C airspace area designated for an airport or 10,000 feet mean sea level (MSL), whichever is lower.
- Above 10,000 feet MSL

D5. Do you receive air traffic services while flying a glider? Please explain the frequency and location of services, and any other information supporting your answer(s).

IV. Regulatory Notices and Analyses

A. Regulatory Flexibility Determination

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires an agency to review rulemakings to assess their impact on small entities unless the agency determines

that a rule is not expected to have a significant economic impact on a substantial number of small entities. The FAA invites comment to facilitate its assessment of the potential impact of a rule removing the glider exceptions pertaining to transponder equipment and use requirements.

B. Paperwork Reduction Act

The FAA has not yet determined whether there will be an information collection associated with this rulemaking. This will be addressed at the time a NPRM, if any, is published.

C. International Compatibility and Cooperation

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to conform to International Civil Aviation Organization (ICAO) Standards and Recommended Practices to the maximum extent practicable. The FAA has reviewed corresponding ICAO Standards and Recommended Practices and will identify any differences with future proposed regulations. These differences will be addressed at the time a NPRM, if any, is published.

D. Environmental Analysis

FAA Order 1050.1E identifies FAA actions that are categorically excluded from preparation of an environmental assessment or environmental impact statement under the National Environmental Policy Act in the absence of extraordinary circumstances. The FAA has determined this ANPRM would qualify for the categorical exclusion identified in paragraph 312f, and would involve no extraordinary circumstances.

V. Executive Order Determinations

A. Executive Order 13132, Federalism

The FAA has analyzed this ANPRM under the principles and criteria of Executive Order 13132, Federalism. The agency has determined that this action would not have a substantial direct effect on the States, or the relationship between the Federal Government and the States, or on the distribution of power and responsibilities among the various levels of government, and, therefore, would not have Federalism implications.

B. Executive Order 13211, Regulations that Significantly Affect Energy Supply, Distribution or Use

The FAA analyzed this ANPRM under Executive Order 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use (May 18, 2001). The agency has determined that it would not be a “significant energy action” under the executive order and would not be likely to have a significant adverse effect on the supply, distribution, or use of energy.

C. Executive Order 13609

Executive Order 13609, Promoting International Regulatory Cooperation, (77 FR 26413, May 4, 2012) promotes international regulatory cooperation to meet shared challenges involving health, safety, labor, security, environmental, and other issues and to reduce, eliminate, or prevent unnecessary differences in regulatory requirements. The FAA will analyze any future action under the policies and agency responsibilities of Executive Order 13609, and determine if the action will have an effect on international

regulatory cooperation. This will also be addressed at the time a NPRM, if any, is published.

VI. Additional Information

A. Comments Invited

The FAA invites interested persons to participate in this rulemaking by submitting written comments, data, or views. The agency also invites comments relating to the economic, environmental, energy, or federalism impacts that might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit only one time.

The FAA will file in the docket all comments it receives, as well as a report summarizing each substantive public contact with FAA personnel concerning this ANPRM. Before acting on this ANPRM, the FAA will consider all comments it receives on or before the closing date for comments. The FAA will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. The agency may change the direction of this rulemaking in light of the comments it receives.

Proprietary or Confidential Business Information: Do not file proprietary or confidential business information in the docket. Such information must be sent or delivered directly to the person identified in the FOR FURTHER INFORMATION CONTACT section of this document, and marked as proprietary or confidential. If

submitting information on a disk or CD ROM, mark the outside of the disk or CD ROM, and identify electronically within the disk or CD ROM the specific information that is proprietary or confidential.

Under 14 CFR 11.35(b), if the FAA is aware of proprietary information filed with a comment, the agency does not place it in the docket. It is held in a separate file to which the public does not have access, and the FAA places a note in the docket that it has received it. If the FAA receives a request to examine or copy this information, it treats it as any other request under the Freedom of Information Act (5 U.S.C. 552). The FAA processes such a request under Department of Transportation procedures found in 49 CFR part 7.

B. Availability of Rulemaking Documents

Electronic copies of rulemaking documents may be obtained from the Internet by—

1. Searching the Federal eRulemaking Portal (<http://www.regulations.gov>);
2. Visiting the FAA's Regulations and Policies web page at http://www.faa.gov/regulations_policies or
3. Accessing the Government Printing Office's web page at <http://www.gpo.gov/fdsys/>.

Copies may also be obtained by sending a request to the Federal Aviation Administration, Office of Rulemaking, ARM-1, 800 Independence Ave, SW., Washington, DC 20591, or by calling 202-267-9677. Commenters must identify the docket or notice number of this rulemaking.

All documents the FAA considered in developing this ANPRM, including economic analyses and technical reports, may be accessed from the Internet through the Federal eRulemaking Portal referenced in item (1) above.

Issued under authority provided by 49 U.S.C. 106(f), 40103, and 44701(a)(5)(a) in Washington, DC, on June 10, 2015.

Jodi S. McCarthy
Director, Airspace Services
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